

AMENDMENT UNDER 37 C.F.R. § 1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408

REMARKS

General remarks.

Claims 1-19 are all the claims pending in the application. Claim 1 has been amended, but only for improved conformance with US practice, and the amendments are respectfully submitted not to be necessary for any reason of patentability, as will become clear from study of the remarks below.

Claims 1-19 are rejected under §103(a). Reconsideration and allowance of the rejection of claims 1-19 is respectfully requested in view of the following remarks.

Ishida in view of Yandrofski.

The Examiner rejected claims 1-8, 9-14, 17-19 under 35 U.S.C. § 103(a) as being unpatentable over Ishida in view of Yandrofski. Applicants respectfully traverse this rejection and respectfully request the Examiner to reconsider this rejection in view of the comments, which follow.

Claims 1-14, and 17.

Claim 1 is the only independent claim in this group. Claim 1 requires that the "filter stages comprise a planar filter". In making this rejection, the Examiner acknowledged that Ishida does not meet this requirement. To compensate for this deficiency of Ishida, the Examiner relied on Yandrofski.

Prior to considering the teachings of Yandrofski, Applicant now makes some technical points regarding Ishida to points out a deficiency of Ishida not yet acknowledged by the Examiner.

Ishida teaches a circuit with several filters and several amplifiers alternating in series. There are also, however, several mixers and local oscillators along the way, performing frequency conversions. Thus, the filters are clearly operating at different frequencies. This is quite different from the claimed "progressive filtering and amplification".

AMENDMENT UNDER 37 C.F.R. § 1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408

The Examiner has conveniently chosen only some of the features of the teaching of Ishida, overlooking those which in fact lead to a teaching radically different from that of the claimed invention. Even if Yandrofski constituted a second reference which teaches planar filters (which it does not), adding planar filters into the circuit of Ishida would still lead to a circuit which performs multiple frequency changes, thus a circuit quite different from the claimed invention. Any circuit based on the teachings of Ishida will necessarily lack the requirement of claim 1 for "progressive filtering and amplification".

Applicant now turns to Yandrofski. In particular, the Examiner asserted that Yandrofski compensates for the acknowledged deficiency of Ishida (i.e., no planar filter) by virtue of a teaching that "planar filters are commonly used in transceiver devices." The Examiner indicated that the subject matter at column 5, lines 5-7 of Yandrofski provided evidence for this assertion. The Examiner concluded that the person of ordinary skill would have replaced the Ishida filters with Yandrofski planar filters "to provide maximize[d] filter performance".

First, Applicant respectfully points out that column 5, lines 5-7 of Yandrofski state:

... and means for transporting the cooling fluid between the compressing means and the cooling device. The compressing means can be located near the base of the structure ...

The relevance of column 5, lines 5-7 of Yandrofski is not understood, and Applicant believes the Examiner may have cited the Yandrofski reference in error, thinking it to be some other reference.

The relevance of Yandrofski in general is not understood, inasmuch as it relates to

a novel use of cryoelectronic equipment to implement an extremely sensitive and stable receiver ... particularly applicable to base station receivers in mobile radio systems ...

Yandrofski, Abstract of the Disclosure. By way of contrast, the problem being addressed in Applicant's originally-filed specification is that of the extreme bulk, expense, and complexity of the antennas at the user end. This is not to say that the invention is limited only to user antennas,

AMENDMENT UNDER 37 C.F.R. § 1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408

and claim 1 truly contains no such requirement. Even so, however, it is respectfully submitted to be clear that Yandrofski does not seem to have much to do with solving the problem at hand.

It is difficult to see a teaching of planar filters in Yandrofski at all. Even if Yandrofski taught planar filters, it is difficult to see how a cryoelectronic based receiver would have been an obvious choice for implementation into the Ishida transceiver. Ishida is complete in and of itself, and does not suggest the use of such a component, or any other planar filter. Applicant finds in Yandrofski no teaching or suggestion that would have motivated the person of ordinary skill, confronted with the problem of reducing expense in user antennas, to have inserted any such Yandrofski component into the Ishida apparatus.

Even taken for what they would have meant as a whole to an artisan of ordinary skill, the combined teachings of these two references fail to provide any motivation whatever for such a combination. Even the problem itself fails to encourage such a combination. The Examiner asserted that "maximizing" filter performance would provide such motivation, but has not shown how the suggested combination, if even possible, would achieve the maximizing; and has not shown that such an arrangement would result in any improvement in the Ishida system. "Maximizing" does not appear to be a reasonable motivation, in this instance, for the suggested combination of the Ishida transceiver and the Yandrofski use of transporting cooling fluid, to the extent such cooling fluid might be thought of as a planar filter.

Moreover, combining Yandrofski with Ishida still would not result in a device with the required "progressive filtering and amplification" of claim 1.

For all of the foregoing reasons, therefore, Applicant respectfully submits that the Examiner has not made out a prima facie case of obviousness, that the Examiner's case for obviousness lacks any convincing statement of motivation for the suggested combination, and that the suggested combination still lacks the planar filter requirement of independent claim 1.

Applicant therefore respectfully requests the Examiner to withdraw this rejection of independent claim 1 and its dependent claims 1-14 and 17.

AMENDMENT UNDER 37 C.F.R. § 1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408

In rejecting claims 4 and 14, the Examiner relied on "official notice" of certain facts relating to rejectivity, and attempts to meet the requirements of these claims by asserting that the particularities recited are no more than a matter of design choice. Applicant respectfully disagrees.

Firstly, Applicant respectfully requests the Examiner to back up his "notice" with prior art evidence. Secondly, the requirement as to the first stage rejectivity found in claim 4 is not at all a matter of design choice. The mere fact that a person of ordinary skill could engineer such a system does not make such a design obvious. Some motivation to make the design is required.

Applicant would understand the Examiner's statement if the particular requirements of the claims had no effect on the operation of the apparatus (e.g., such might be the case if moving a power-on switch from one location to another on a PC), but such a situation is not here presented.

Here, the originally-filed specification states that:

low noise filters with a high rejectivity
are difficult to implement in planar
technology.

That is one reason not to use them at all in this kind of setting. However, the inventors named in this application have determined that:

the noise caused by filtering is principally
a function of the noise introduced by the
first filter connected to the radiating
device, the noise contributed by the other
filter(s) being negligible in practice
because it is reduced in proportion to the
gain of the amplifiers between the other
filter(s) and the radiating device.

Applicant's specification, page 4, lines 5-10.

By appropriately selecting the rejectivity of the first stage filter, the noise can be reduced, and a planar filter can therefore be used even though others have thought the planar filter unsuitable due to the high losses experienced when the rejectivity is made an appropriate level.

AMENDMENT UNDER 37 C.F.R. § 1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408

As evidence, the Examiner may see the discussion of EP 0 744 831, mentioned in Applicant's specification at page 3, line 13.

Therefore, what the Examiner has termed a matter of design choice is an important aspect of the claimed invention. The Examiner's approach is similar to a *per se* rule that any given number is a matter of design choice.

The United States Court of Appeals for the Federal Circuit has expressly stated that all *per se* rules of obviousness are legally invalid and that the obviousness analysis must be based on the prior art:

The use of *per se* rules, while undoubtedly less laborious than a searching comparison of the claimed invention -- including all its limitations -- with the teachings of the prior art, flouts section 103 and the fundamental case law applying it. ***Per se rules that eliminate the need for fact-specific analysis of claims and prior art may be administratively convenient for PTO examiners and the Board. Indeed, they have been sanctioned by the Board as well. But reliance on per se rules of obviousness is legally incorrect and must cease.*** Any such administrative convenience is simply inconsistent with section 103, which, according to *Graham* and its progeny, entitles an applicant to issuance of an otherwise proper patent unless the PTO establishes that the invention as claimed in the application is obvious over cited prior art, based on the specific comparison of that prior art with claim limitations.

In re Ochiai, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995) (emphasis supplied).

If the Examiner maintains the present rejection, Applicant respectfully invites the Examiner to identify relevant prior art that meets the requirements of the claims instead of assertions as to what would be an obvious design choice.

For all of the foregoing reasons, therefore, Applicant respectfully requests the Examiner now to reconsider and to withdraw this rejection of claim 1 and its dependent claims 1-14 and 17.

AMENDMENT UNDER 37 C.F.R. § 1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408

Claims 18 and 19

Independent claim 18 is respectfully submitted not to be obvious over Ishida in view of Yandrofski. Claim 18 recites:

the filtering and amplification are progressive, the first filtering stage, starting from the radiating means, uses a planar filter whose rejectivity is a small fraction of that needed to eliminate transmit frequencies throughout the corresponding system and the first stage amplifier gain is a small fraction of the total necessary gain.

As the Examiner will appreciate, the foregoing points made with respect to independent claim 1 apply with equal force here. The combined teachings of Ishida and Yandrofski do not meet the foregoing requirement of claim 18 for the same reasons.

Applicant therefore respectfully requests the Examiner to reconsider and to withdraw this rejection of independent claim 18 and its dependent claim 19.

Ishida and Yandrofski in view of Caille.

The points already made with respect to independent claim 1 apply to its dependent claims 15 and 16.

Applicants, once again, respectfully point out that the Caille patent is not prior art for reasons which the Examiner will readily grasp after studying the faceplate of that patent, keeping in mind that the present application has the benefit of at least the filing date of May 10, 1999 (the PCT filing date, and may be entitled to benefit from the foreign priority date of May 15, 1998 once the claim to this benefit is perfected, if this becomes necessary).

Since Caille is not a reference against the claims of the present application, this rejection of claims 15 and 16 is literally moot.

If the Examiner maintains that Caille is a valid reference, Applicant respectfully requests the Examiner to explain the statutory basis for such a position.

AMENDMENT UNDER 37 C.F.R. § 1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408


Conclusion and request for telephone interview.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860


Kelly G. Hyndman
Registration No. 39,234

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AMENDMENT UNDER 37 C.F.R. § 1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended two times) A circuit for receiving microwaves, the circuit comprising:
radiating means for receiving microwaves,
filter means for eliminating microwaves transmitted at different frequencies by the radiating
means, and
means for amplifying received microwaves; [, and]
wherein:
the filter means and means for amplifying [connected to the radiating means being]
include at least two filter and amplifier stages connected to the radiating means,
the filter stages [comprising] comprise a planar filter and the amplifier stages
[comprising] comprise an amplifier, [wherein:]
the planar filter has, as a rejectivity for transmit frequencies, a fraction of the total
rejection needed to eliminate the transmit frequencies,
the amplifier has, as a gain, a fraction of the total gain of the circuit, and
said filter and said amplifier stages apply progressive filtering and amplification.